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ABM Defense Nears Acceptance

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There is now a better than even chance that the United States will build a limited missile defense costing between $3 billion and $6 billion.

Technical, political and diplomatic developments have weighted the odds in favor of such a system, informed civilian and military officials believe, although Secretary of Defense Robert S. McNamara is still considered a holdout.

On the technical front, most of the Pentagon's civilian hierarchy believes it is time to go from the current paper studies and test firings to working anti-ballistic-missile (ABM) hardware.

Pentagon research chief John S. Foster Jr.; Army Secretary Stanley R. Resor; Navy Secretary Paul H. Nitze, and Air Force Secretary Harold Brown all are in this camp. They differ in their degrees of enthusiasm and also in just where the defending missiles should be put. But they are agreed that some kind of missile defense is justified if the Soviet Union cannot be talked out of going ahead with her ABM.

Military All for It

Military leaders are all for an ABM defense, as they were last year and, to a lesser degree, the year before. They want a tighter missile defense, starting with a package costing $10 billion and then doubling it later in coverage and cost. Secretary McNamara has doubled their top estimate arbitrarily, predicting that the ultimate cost would be some $40 billion.

Politically, the modest $3 billion to $6 billion missile defense is all but irresistible. The House Appropriations Committee has said that some kind of missile insurance is worth buying, even if it is not comprehensive. And an increasing number of lawmakers are asking, why quibble over $6 billion to protect the whole United States when the United States spends $2 billion a month on Vietnam?

President Johnson and Secretary McNamara have said they no longer say without serious challenge that the U.S. missile defense system, called Nike X, has too many bugs in it to justify building. There is too much technical evidence to the contrary on record.

He can say, and has, that we should wait to see whether we can talk the Soviet Union out of going ahead with a missile defense; then both nations can save billions. Congress has stood still for this approach.

But in recent weeks, the patience of the lawmakers on this question has grown thin. They have been asking the Pentagon leaders how long the United States intends to put off building an ABM in hopes an agreement can be reached with the U.S.S.R.

No Deadline Set

The Pentagon leaders have not set a deadline. But Deputy Defense Secretary Cyrus Vance is on record as saying: "We feel that it is of the utmost importance that these discussions (on an ABM freeze) move forward as rapidly as possible. We feel a deep sense of urgency."

Privately, State Department officials say there is little prospect of meaningful negotiations with the Soviet Union on the ABM.

If Secretary McNamara chooses to make the fight, he must sell the President and Congress on the proposition that an ABM system, even if the Soviet Union continues building one, will not buy the United States any more security. He has argued that the name of the game is deterrence — scaring the enemy out of any thoughts of starting a nuclear war in the first place because it would mean suicide.

Army Secretary Resor and others argue that a thin defense would have a good chance of stopping ICBMs fired accidently as well as early Chinese missiles. Some weapon specialists see a big advantage against the Russian threat as well, contending that an ABM is one more complicating factor they would have to contend with as they weighed the risks of a first strike.

Foster, director of Pentagon research, estimates that the thin defense would cost about $3 billion and another $800 million for fallout shelters. Beefing up the defense here and there, say around our ICBM sites, could raise the price to $6 billion or even $8 billion.

Many Combinations

The reason the prices can vary so widely is that U.S. Nike X parts are like thinker toys — they can be built in any number of combinations. There is a long-range missile called the Spartan, a short-range one called the Sprint and three different types of radar for keeping an eye on incoming ICBMs and directing our Spartans and Sprints to them.

The Spartan has a range of 400 miles. It is designed to intercept a warhead out in space. With this much range, batteries of ten Spartans each could be spaced 300 miles apart all around the perimeter of the United States.

With such spacing, it would take ten Spartan missiles sites to cover the Canadian border of the United States, another ten for the southern periphery of the United States and five each on the east and west coasts for a total of 30 sites.

But instead of such a perimeter defense, the thin ABM defense contemplated would be a combination of sites on the coast and inland for maximum protection. Still, some 30 sites of ten Spartans each would put a thin umbrella over the entire United States.

This minimum force of 300 Spartans compares with 1000 Minuteman offensive ICBMs planned. But besides these Spartans, the sites would need some short-range Sprints to protect their radars.

Sprint, with a range of about 25 miles, is designed to intercept close to the earth those enemy warheads which elude Spartans out in space.

The thickening of the ABM makes the price go up. For example, the Joint Chiefs of Staff would have about 1000 Spartans and 100 Sprints in their $10 billion defense — called Posture A. Their $20 billion defense—Posture B for protecting 50 instead of 25 cities — would be about the same number of Spartans backed up by thousands of Sprints.

The way Spartan and Sprint would stop an incoming warhead would be to explode their hydrogen bomb tips near it. The Spartan relies on X-rays and neutrons to blow up or incapacitate the warhead. The Sprint counts mostly on blast, heat and neutrons, not X-rays.

If the radars do their job, Spartan would get within three miles and perhaps one mile of the incoming warhead. Then its one megaton plus warhead—50 times the power of the Hiroshima bomb — would go off. About 80 per cent of the yield would be X-rays, ten per cent neutrons and the rest fission products.

The X-rays would slam into the warhead casing, changing into such a high amount of heat that the warhead would be ruined. The casing of the warhead would be melted.

Its bomb turned into a dud and its heat shield ruined, the warhead would most likely burn up or break up when it hit the atmosphere.

The reason the X-rays are so effective is that there is no atmosphere in space to slow them down. They travel for miles, but do spread out eventually like a flashlight beam.

The neutrons from Spartan would do their damage by working on U-238 packed inside the warhead. The neutrons would travel through the warhead casing and ruin the H-bomb inside.

The Sprint, unlike the Spartan, relies primarily on heat from its fireball and the neutrons. This means the Sprint must get closer to the enemy warhead before its own small H-bomb can do its task—turn the incoming warhead into a dud.